

# THREE-DIMENSIONAL SHAPE MEASURING METHOD

## ABSTRACT OF THE DISCLOSURE

A three-dimensional shape measuring method by which measurement of a three-dimensional shape is realized with an improved precision. Grid patterns comprising a plurality of one-dimensional grids 1, 2 and 3, each having a period and direction different from those of the others, are simultaneously projected upon objects to be measured, using different colors for each of the one-dimensional grids 1, 2 and 3. Subsequently, a grid image deformed in accordance with the three-dimensional shapes of the objects to be measured is imaged, the grid image is separated by colors into one-dimensional grid components of each color, a phase for each of the one-dimensional grid components is detected, and then, measurement values of the three-dimensional shapes are obtained on the basis of the detected phases. At the same time, by imaging the objects to be measured by use of white light, color information on the objects to be measured are measured as well.

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